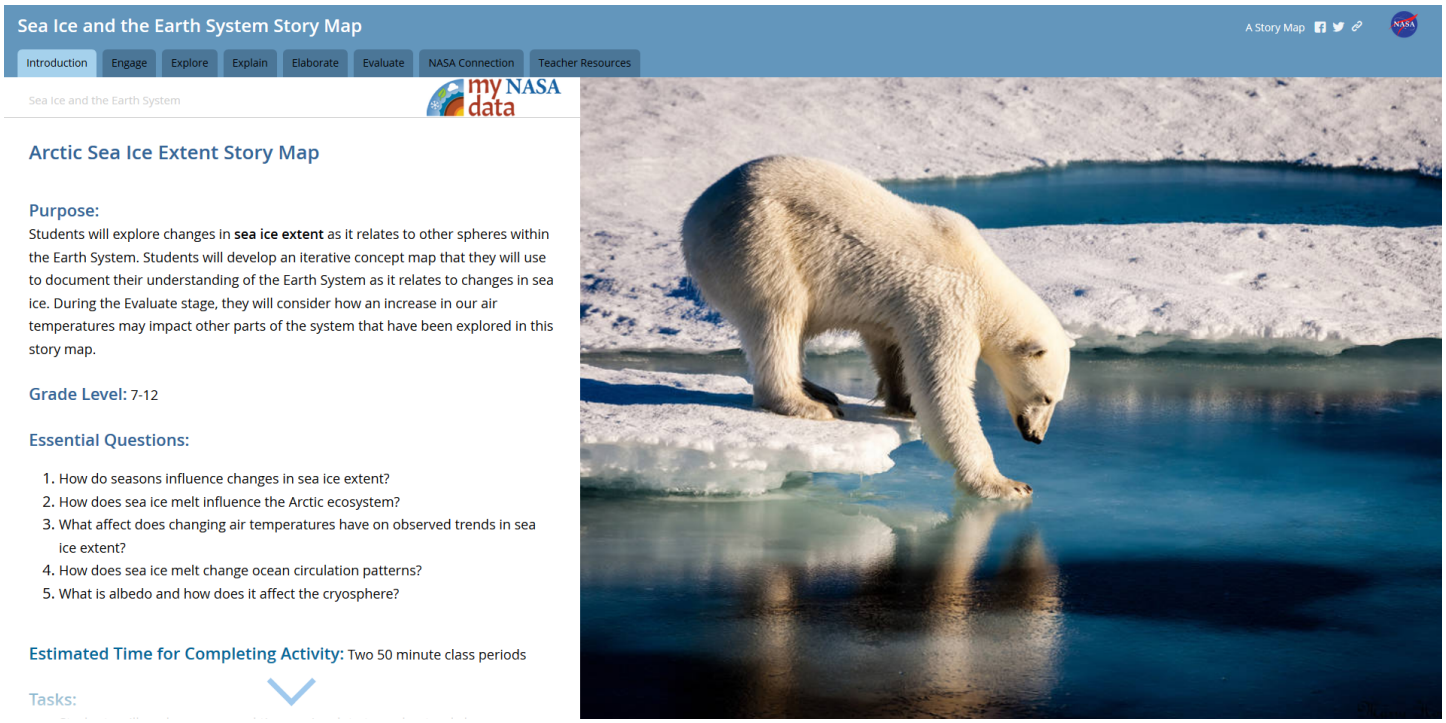
My NASA Data - Interactive Models

Sea Ice and the Earth System Story Map



Sea ice is frozen seawater that floats on the ocean surface in both the Arctic and the Antarctic. This floating ice has a profound influence on the polar environment, influencing ocean circulation, weather, and regional climate. Sea ice is constantly changing with periods of growth and melting throughout the year. The amount of sea ice in the Arctic increases during the winter months, usually starting in September, and decreases during the summer months, usually starting in March.

Teachers who are interested in receiving the answer key, please complete the Teacher Key Request and Verification Form. We verify that requestors are teachers prior to sending access to the answer keys as we've had many students try to pass as teachers to gain access.

Grade Band

- 6-8
- 9-12

Supported NGSS Performance Expectations

- 5-ESS2-1: Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.
- MS-ESS2-6: Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates.
- HS-ESS2-2: Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems.
- HS-ESS3-5: Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth's systems.

Related Resources

- Changing Albedo and Sea Ice
- Does Albedo Effect Arctic Populations?
- Explore Albedo Values
- Positive Feedback - Arctic Albedo
- Sea Ice and the Earth System Story Map
- Seasonal Arctic Albedo
- Using Data and Images to Understand Albedo
- Instructional Strategies for the Earth Science Classroom
- Data Literacy Cube Guide